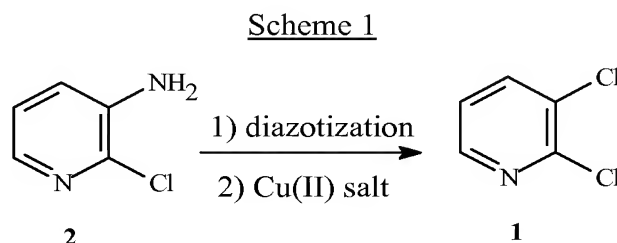


Amendments to the Specification

Please replace current paragraphs [0114], [0117] and [0135] with the following:

[0114] Embodiment VV: The method of Embodiment UU wherein the nominal mole ratio of the strong base to nicotinamide **4** is about 2 to about 4 when the halogenating agent is chlorine or bromine; the nominal mole ratio of the strong base to nicotinamide **4** is about 1 to about 2 when the halogenating agent is sodium hypochlorite; and the nominal mole ratio of halogenating agent to nicotinamide **4** is about 0.9 to about 1.1.

[0117] According to the present invention, e.g., Method A, as shown in Scheme 1, 2,3-dichloropyridine **1** is prepared by diazotization of 2-chloro-3-aminopyridine **2** followed by decomposition of the diazonium chloride salt in the presence of a Cu(II) salt, i.e. in the presence of a copper catalyst wherein at least about 50 % of the copper is the copper(II) oxidation state.



The diazonium chloride salt can be prepared by reaction of 3-amino-2-chloropyridine **2** with nitrous acid in an aqueous solution at a suitable temperature. The nitrous acid can be generated *in situ* from a nitrite salt and hydrochloric acid. Various nitrite salts can be used, such as sodium nitrite, potassium nitrite, calcium nitrite, or any alkali or alkali earth nitrite. A suitable nitrite salt is sodium nitrite for the reasons of cost and availability. For references on how to prepare diazonium ~~salt~~ salts see H. Zollinger, *Azo and Diazo Chemistry*, Wiley-Interscience, New York, 1961; S Patai, *The Chemistry of Diazonium and Diazo Groups*, Wiley, New York, 1978, Chapters 8, 11 and 14; and H. Saunders and R.L.M. Allen, *Aromatic Diazo Compounds*, Third Edition, Edward Arnold, London, 1985. In one embodiment of the process of the present invention, a solution comprising 3-amino-2-chloropyridine **2** is contacted with a first aqueous solution comprising hydrochloric acid to form 3-amino-2-chloropyridine hydrochloric acid salt. The 3-amino-2-chloropyridine hydrochloric acid salt is then contacted with an aqueous solution comprising a nitrite salt to form a diazonium chloride salt. Diazotization of the 3-amino-2-chloropyridine hydrochloric acid salt is suitably accomplished by adding aqueous sodium nitrite to a mixture of the 3-amino-2-chloropyridine **2** in about 10 % to about 37 % aqueous hydrochloric acid.

Additional embodiments for these steps of the present method, for example but not limitation Method A, are described above.

[0135] To a mixture of 24.4 g (0.200 mol) of nicotinamide **4** and 120 mL of water at about 0 °C was added sodium hypochlorite (237 g, 6.89 wt % aqueous solution, 0.22 mol) over 30 minutes. After stirring for over 15 minutes at 0 °C, aqueous NaOH (32 g, 0.40 mol, 50 wt %) was added to the mixture over 30 minutes at 0-5 °C. This resulting solution was charged to 280 mL of water at 90 °C over 30 minutes and stirred an additional hour at 90 °C. Concentrated aqueous HCl (60 g, 37 wt %, 0.20 mol) was added over 45 minutes at 40 °C and the mixture was stirred overnight and concentrated at reduced pressure to remove most of the water. The mixture was then filtered to remove salt, which was washed with two 80 mL portions of 9 % aqueous HCl. Analysis of the filtrate showed that it contained about 16.1 g of 3-aminopyridine **3** (ca. 86 % yield). To the crude 3-aminopyridine **3** solution was added anhydrous HCl (ca. 80 g, 2.2 mol) at 0 °C. Hydrogen peroxide (17.6 g, 46 % solution, 0.24 mol) was added over 2 hours at 0-5 °C, and the mixture was stirred at 15-20 °C for an additional 3 hours. To the mixture was added aqueous sodium bisulfite solution (12 mL, 30%), water (200 mL), toluene (50 mL), and aqueous NaOH (82 g, 1.03 mol, 50 %) sequentially at about 0-20 °C. The layers were separated. The aqueous layer was washed with ten 50 mL portions of toluene to remove overchlorinated byproducts, and then basified to pH 10 with 20 g of 50 % aqueous NaOH. The basified aqueous solution was extracted with four 100 mL portions of toluene and the combined toluene extracts were washed with two 40 mL portions of 18 wt % aqueous HCl. HPLC analysis of the resulting aqueous HCl extracts showed it contained about 15.3 g (0.119 mol) of 3-amino-2-chloropyridine **2** (ca. 69.7 % yield from 3-aminopyridine **3**, 60 % from nicotinamide **4**). These extracts were cooled to about -5 °C and a solution of 8.3 g of sodium nitrite (0.12 mol) in 16.6 mL of water was added over 30 minutes at about -5 to 0 °C. The resulting mixture was charged over 1 hour to a mixture containing cupric chloride ~~dehydrate~~ dihydrate (10.14 g, 0.0595 mol), concentrated aqueous HCl (24.3 mL) and 1-chlorobutane (72 mL) at about 60 °C under a nitrogen atmosphere. After an additional 30 minutes at 60 °C, the mixture was cooled to ambient temperature and diluted with 120 mL of water. The layers were separated. The aqueous layer was extracted with two 70 mL portions of 1-chlorobutane. The combined extracts were found to contain about 14.7 g of 2,3-dichloropyridine **1** (83.6 % yield from 3-amino-2-chloropyridine **2**, or 50 % from nicotinamide **4**).